Abstract

     A method of accurately estimating horizontal and vertical wire densities in a datapath or hardmac. The method provides that the datapath or hardmac is divided into areas, and mathematical expectations are calculated for full and partial horizontal and vertical segments for each of the areas. The mathematical expectations are summed for both the horizontal and vertical segments, and this is done for each connection within the datapath or hardmac in order to estimate both horizontal and vertical wire densities. A congestion map can be created, and 100% detail routing is effectively guaranteed as a result of using the method. Preferably, a model with minimum bends is used in areas with low wire density, and models with more bends are used in areas with middle and high wire density.

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